

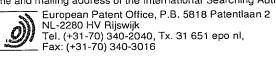


## From the INTERNATIONAL SEARCHING AUTHORITY

## PCT

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To:				
KIMURA, Mitsuru		INVITATION TO PAY ADDITIONAL FEES		
2nd Floor, Kyoha	RECEIVED			
	chall-bidme V L L	(PCT Arti	cle 17(3)(a) and Rule 40.1)	
Chiyoda-ku	OCD 1.0.2004	(1 0 1 7 11 11	ole 17(0)(a) and 11ale 40.17	
Tokyo 101-0054	SEP 1 0, 2004			
JAPAN				
	ASHIDA & KIMURA			
		Date of mailing		
		(day/month/year)	08/09/2004	
		DAVIMENT DUE		
Applicant's or agent's file ref	ference .	PAYMENT DUE	within 45 XXXXXIXs/days	
02F023-PCT			from the above date of mailing	
International application No.		International filing date		
PCT/JP 02/13442		(day/month/year)	24/12/2002	
Applicant			•	
TOKYO ELECTRON D	EVICE LIMITED	·		
This International Sea  (i) considers that the by the claims income.		mber of) inventions clain	ned in the international application covered	
	that the international application does no 2 and 13.3) for the reasons indicated ACC		ements of unity of invention	
on those parts o		e to the invention first mer	,	
to which, addition	e international search report on the other and fees are paid			
The applicant is here	by <b>invited</b> , within the time limit indicated	l above, to pay the amour	nt indicated below:	
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	al invention number of additional in			
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The applicant is inforr i.e., a reasoned state	med that, according to Rule 40.2(c), the pment to the effect that the international apthe required additional fee is excessive.	payment of any addition	al fee may be made under protest.	
3. Claim(s) NosArticle 17(2)(b)	because of defects under Article 17(2)(a)	and therefore have not be	en found to be unsearchable under een included with any invention.	

Name and mailing address of the International Searching Authority



Authorized officer

Nabila Saioudi

Form PCT/ISA/206 (July 1992)

## Annex to Form PCT/ISA/206 COMMUNICATION RELATING TO THE RESULTS OF THE PARTITIONAL SEARCH

International Application No PC P 02/13442

- 1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
- see 'Invitation to pay additional fees' 2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
- 3.If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
- 4.If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 5 778 439 A (JOHNSON ROBERT ANDERS ET AL) 7 July 1998 (1998-07-07)	1,4,5, 11,14,15 2,3,12, 13
X	figure 3A figure 11 figure 22A figure 37A column 2, line 1 - line 16 column 6, line 36 - line 48 column 19, line 1 - line 6 column 22, line 5 - line 11 column 26, line 56 - line 59 column 30, line 39 - line 41 column 30, line 61 - line 63 column 32, line 25 - line 31 column 32, line 46 - line 53 US 5 760 602 A (TAN CHARLES M C)	1,4,5,
A	2 June 1998 (1998-06-02)  figure 1 figure 10	11,14,15 2,3,12, 13
	column 3, line 39 - line 43 page 5, column 5, line 1 - line 9 column 7, line 20 - line 27	

- Special categories of cited documents:
- A document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- 'L.' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed
- 'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- 'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5,11-15

Means for switching configurations in a time multiplexed reconfigurable computing system.

2. claims: 6,9,16,19

A reconfigurable computing system with a stack memory.

3. claims: 7-8,10,17-18,20

A reconfigurable computing system with configuration load on miss.

## Reasons for lack of unity

The closest prior art US5760602 (D1) discloses an heterogeneous programmable array (figure 1) with a plurality of storage units (configuration memory cells) which store a plurality of configuration data modules including look up tables (column 5, lines 1 to 10) and a logic computing unit which includes a plurality of programmable logic circuits (prog. switch elements) wherein said logic computing unit provides a logic function value of logic input data as logic output data by referring to at least one configuration data module stored in at least one of said plurality of data storage units (figure 3, LUT). It further comprises a selector (Time slice controller) that selects one of said plurality of data storage units circularly (figure 10).

The differences between the disclosure of D1 and the three inventions can be defined as follows:

Group I : The system of claim 2 differs from that of  $\,$  D1 in that the storage units form a shift register.

Group II: The system of claim 6 differs from that of D1 in that a detector detects calls to or returns from configurations and a controller that stores internal parameters in a parameter register on calls and restores the internal parameters from the parameter register on returns.

Group III: The system of claim 7 differs from that of D1 in that a detector detects calls to or returns from configurations and a controller activates the loading of the target configuration if this one

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is not already present in one of the configuration data modules.

The respective objective problems solved by these differences are:

Group I : to provide a fast switching between configurations with low interconnection overhead.

Group II : to keep the internal state of a configuration between configuration switches.

Group III: to handle a number of configurations greater than the number of configuration memory planes implemented internally.

The features of the claims on file which make a contribution over the prior art, i.e. the Special Technical Features, are consequently: the shift register like interconnection of the memories holding the configurations (claim 2), the separate stack memory for saving/restoring internal parameters (claim 6) and the loader that loads configurations as they are referenced if they are not already available.

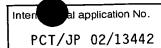
Since the special technical features are neither identical nor corresponding (i.e they cannot function in an equivalent, complementary or cooperative manner special technical feature of another invention or are specially adapted to a special technical feature of another invention), there are no same or corresponding special technical features shared by all independent claims of the invention.

In conclusion, therefore, the three groups of claims are not linked by common or corresponding special technical features and define two different inventions not linked by a single general inventive concept. The application, hence, does not requirements of Unity of Invention as defined in Rule 13(1) & (2) PCT.

The application relates to a plurality of inventions, or groups of inventions, in the sense of Rule 13.1 PCT. They have been divided as defined above. If the applicant pays additional fees for one (or more) not yet searched group(s) of invention(s), then the further search(es) may reveal further prior art that gives evidence of a further lack of unity 'a posteriori' within one (or more) of the not yet searched group(s). In such a case only the first invention in this (each of these) group(s) of inventions, which is considered to lack unity of invention, will be the subject of a search.

No further invitation to pay further additional fees will be issued. This is because Article 17(3)(a) PCT stipulates that the ISA shall establish the International Search Report on those parts of the international application which relate to the invention first mentioned in the claims ('main invention') and for those parts which relate to inventions in





respect of which the additional fees were paid. Neither the PCT nor the PCT guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

Patent Family Annex

tion on patent family members

International Application No
P( P 02/13442

	document earch report		Publication date		Patent family member(s)	Publication date
US 57	78439	Α	07-07-1998	NONE		
US 57	60602	Α	02-06-1998	EP JP	0785630 A2 10173516 A	23-07-1997 26-06-1998